MicroLink® dLAN® duo

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Preface

Thank you for placing your trust in this devolo product.

The devolo MicroLink dLAN duo is a HomePlug adapter for data communications over the household electrical power supply network. With its Ethernet and USB ports, the dLAN adapter lets you set up or expand a home network easily and economically. Functions such as copying or moving files, using shared printers or accessing the Internet are all realized via existing power lines in your home. With the MicroLink dLAN duo, any electrical socket in your home can be used as a network connection—from the basement to the attic.

About this manual

This manual contains all the information you need about your MicroLink dLAN duo from devolo. It tells you how to set up and install your dLAN adapter. The 'All about the home network' chapter also contains examples of applications for the MicroLink dLAN duo and general information on networks.

Exacting manufacturing standards and stringent quality control are the basis for high product standards and consistent quality to ensure your fullest satisfaction with this MicroLink dLAN duo.

This documentation was compiled by several members of our staff from a variety of departments in order to ensure you the best possible support when using your product.

Additional information in the Internet at 'www.devolo.com'

Our online services (www.devolo.com) is available to you around the clock should you have any queries or require any further support.

Package contents

Please ensure that the delivery is complete before beginning with the installation of your MicroLink dLAN duo:

- MicroLink dLAN duo
- Ethernet cable (3 m)
- USB cable (5 m)
- Printed manual
- CD with drivers, online documentation and application software

devolo reserves the right to change the package contents without prior notice.

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1 Introduction

This chapter gives you an overview of the new dLAN technology and a brief introduction to the MicroLink dLAN duo.

1.1 What exactly is dLAN?

There is now a new alternative to the well-known wired LAN and Wireless LAN network technologies currently used in home networking: dLAN (direct LAN, i.e. directly networked). dLAN is home networking using the electric wiring already installed in the building.

Cost factor and transmission quality

dLAN is an economical and easy-to-use networking technology. You don't need to lay cables and you can connect to the home network at every power point.

The dLAN technology modulates and demodulates additional frequencies on the power lines. Modulation and demodulation is a well-known and proven method of data transmission, which has been in use in other applications for a number of years. Now it is used to set up Internet and network accesses in the home or office. Depending on the damping factor, distances of up to 200 meters can be covered.

With a maximum data transmission rate of 14 Mbps and symmetrical upload and download, the dLAN technology is equivalent to classical Ethernet networking solutions and is faster than the current wireless standard WIFI™ for home applications. Depending on the line quality, bandwidths of 6 to 8 Mbps are possible in practice—quite sufficient for extending the DSL connection to all rooms.

Data security and radiation

The power meter in the building acts as a physical barrier against unwanted access from outside. Furthermore, for the sake of security, the DESpro encryption is used to guarantee secure data transfer within the network.

dLAN devices from devolo meet the stringent EU industrial standards and comply with the current standards for electromagnetic radiation.

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1.2 What does the MicroLink dLAN duo offer you?

Powerful and flexible

Ethernet or USB? This question no longer arises with the devolo MicroLink dLAN duo. Featuring both Ethernet and USB ports, the MicroLink dLAN duo combines the features of dLAN Ethernet and dLAN USB devices. The result is new freedom and flexibility: it's no longer necessary to settle on one or the other connection technology. For example, PCs or laptops can be integrated into a dLAN network using either of the ports—depending on which one is available.

You can find examples of possible networks and general information in the chapter 'All about the home network'.

Simple installation

- Connect the MicroLink dLAN duo to the computer or the device with the Ethernet or USB cable

The MicroLink dLAN duo can be connected either via Ethernet or USB ports. If both are installed, USB has priority.

- Connect the MicroLink dLAN duo to the power outlet
- Install the devolo drivers (for USB connection)
- Install the devolo MicroLink dLAN Software
- Done!

Ethernet and USB port

The MicroLink dLAN duo has

- an Ethernet port for connecting to a device in the home network (e.g. PC, notebook, modem, router, switch etc.),
- a USB output for connection to a computer in the home network with a USB port,
- a standard power plug for connection to a power outlet.

Status display

The indicator lights (LEDs) of your MicroLink dLAN duo show the connection status and allow the data transmission to be checked. The MicroLink dLAN duo has 6 indicator lights.

1.3 Protect your child in the Internet with OrangeBox Web Home

The Internet has become an everyday tool for everybody: Large or small, young or old, for private use or for business—the whole world is using the worldwide web as a platform for exchanging information. But there are also potential threats which parents need to protect their children from.

The OrangeBox Web Home software, which is supplied with the dLAN adapter, provides more protection for your child in the Internet. It allows you to set filters that allow Internet pages to be accessed or blocked. Internet access can even be blocked completely. You will find more information about this product under www.friendly-internet.com.

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2 Connection and installation

This chapter shows you how to connect the devolo MicroLink dLAN duo. It also contains a brief description of the installation procedure under Windows 98, Windows Me, Windows 2000 and Windows XP.

2.1 System requirements

Your computer must meet the following requirements to operate with your MicroLink dLAN duo:

- **Operating systems**: Windows 98, Windows Me, Windows 2000, Windows XP, Linux, Mac OS X (only for Ethernet connection) or all TCP/IP operating systems
- **Ethernet port**

Note that your computer or the device to which you want to connect the MicroLink dLAN duo must have an Ethernet port, i.e. a network card or a network adapter.

- **USB port**

Note that the computer to which the MicroLink dLAN duo is to be connected must have a USB port.

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2.2 Connection and display elements

The MicroLink dLAN duo adapter has six indicator lights (LEDs) as well as an Ethernet and a USB port:

- **ETH/USB**
  - **100/Act**: Lit while 100 Mbps data transfer rate is active.
  - **10/Act**: Lit while 10 Mbps data transfer rate is active.
  - **USB**: Steady when connected to USB.
- **dLAN**
  - **Power**: Steady when connected to power.
  - **Act**: Flashes when data is being sent or received over the electrical lines.
  - **Link**: Steady when connected to the dLAN network.
- **Ethernet port**: This is the connection point on the MicroLink dLAN duo adapter for connecting it to a computer or another device with the network cable (included).
- **USB port**: This is the connection point on the MicroLink dLAN duo adapter for connecting it to a computer with the USB cable (included).

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2.3 Connecting the MicroLink dLAN duo...

In this section, we will show you how to connect the MicroLink dLAN duo—**either** via Ethernet **or** USB. If both are installed, USB has priority.

Before connecting the MicroLink dLAN duo please note its security ID and keep it available for configuration of the network. The security ID can be found on the bottom of the dLAN adapter.

2.3.1 ...via Ethernet

① With the computer running connect the MicroLink dLAN duo adapter to an Ethernet port of the computer with the network cable (included).

② Plug the MicroLink dLAN duo adapter into a convenient power socket.

③ Then install the devolo MicroLink dLAN Software. For more information see the 'devolo MicroLink dLAN Software' chapter.

No drivers are required for installation of the MicroLink dLAN duo adapter.

2.3.2 ...via USB

① With the computer running connect the MicroLink dLAN duo adapter to a USB port of the computer with the USB cable (included).

② Plug the MicroLink dLAN duo adapter into a convenient power socket.

③ Now install the drivers in the desired operating system.

④ Then install the devolo MicroLink dLAN Software. For more information see the 'devolo MicroLink dLAN Software' chapter.

Driver installation...

The MicroLink dLAN duo supports plug&play. This makes installation much easier. Windows wizards guide you through the installation process and request the required data.

...under Windows 98

① Put the devolo product CD in your CD-ROM drive.

② Windows starts the hardware wizard and reports that new hardware has been detected. Confirm by clicking **Next**.

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③ Windows provides you with two options for searching for drivers. Select the 'Search for the best driver for your device (Recommended)' option and click **Next**.

④ The correct driver can be found on the devolo product CD. Activate the 'CD-ROM drive' option and deactivate all other boxes. Then click **Next**. The driver installation is started.

⑤ Click **Next** to continue the installation.

*You may be prompted to insert the Windows 98 CD. Insert it into your CD-ROM drive and click **OK**.*

⑥ By clicking **Finish** you'll exit the installation.

⑦ Click **Yes** to any prompts to restart the computer.

...under Windows Me

① Put the devolo product CD in your CD-ROM drive.

② Windows starts the hardware wizard and reports that new hardware has been detected. Confirm by clicking **Next**.

③ Windows provides you with two options for searching for drivers. Select the 'Automatic search for a better driver (Recommended)' option and click **Next**. The driver installation is started.

④ By clicking **Finish** you'll exit the installation.

⑤ Confirm any prompts to restart the computer with **Yes**.

...under Windows 2000

① Put the devolo product CD in your CD-ROM drive.

② Windows 2000 starts the hardware wizard and reports that new hardware has been detected. Click **Next**.

③ The wizard offers two options to search for the driver. Select the 'Search for a suitable driver for my device (recommended)' option and click **Next**.

④ The correct driver can be found on the devolo product CD. Activate the 'CD-ROM drives' option and deactivate all other boxes. Then click **Next**. The driver installation is started.

⑤ Click **Next** to continue the installation.

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⑥ By clicking **Finish** you'll exit the installation.

...under Windows XP

① Put the devolo product CD in your CD-ROM drive.

② Windows XP starts the hardware wizard and reports that new hardware has been detected.

③ In the following dialog window activate the option 'Install the software automatically (Recommended)'. Click **Next**. The driver installation is started.

④ By clicking **Finish** you'll exit the installation.

In the next chapter 'All about the home network' you can find useful information on networks. For more information on the installation of the devolo MicroLink dLAN Software please see the 'devolo MicroLink dLAN Software' chapter.

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3 All about the home network

This chapter contains important and useful information on networks—from the configuration of your computer to examples of applications to general tips.

3.1 Configuring the computer

Now that you have successfully connected and installed your devolo dLAN adapter, we show you how to configure your computer correctly and how to check existing settings.

3.1.1 Windows 98 and Windows Me

① Open the properties of the LAN connection on the connected computers by selecting **Start** ▶ **Settings** ▶ **Control Panel** ▶ **Network**.

② Click the entry for the TCP/IP protocol of the network adapter and on **Properties**. Enable the option 'Obtain an IP address automatically'. You can ignore all other options: they either remain empty or retain their default settings. Close the dialogs with **OK**.

*If you cannot find an entry similar to 'TCP/IP' or 'TCP/IP -> Network Adapter Name' or 'Internet Protocol (TCP/IP)', you must install the TCP/IP protocol. Under **Add** select 'Protocol' and click **Add** again. In the next dialog box under 'Manufacturer' select 'Microsoft' and under 'Network Protocol' select 'TCP/IP'.*

③ If you use a router for Internet access, you will still need to configure it, because the router dials into the Internet, not the computer. Under **Start** ▶ **Settings** ▶ **Control Panel** ▶ **Internet Options** select the 'Connections' tab and enable the 'Never dial a connection' option. Close the dialogs with **OK**.

3.1.2 Windows 2000

① Open the properties of the LAN connection on the connected computers by selecting **Start** ▶ **Settings** ▶ **Control Panel** ▶ **Network and Dial-up Connections**. Click with the right mouse button on the corresponding LAN connection and select 'Properties'.

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② Click the entry for the TCP/IP protocol of the network adapter and on **Properties**. Enable the option 'Obtain an IP address automatically'. You can ignore all other options: they either remain empty or retain their default settings. Close the dialogs with **OK**.

*If you cannot find an entry similar to 'TCP/IP' or 'TCP/IP -> Network Adapter Name' or 'Internet Protocol (TCP/IP)', you must install the TCP/IP protocol. Under **Install** select 'Protocol' and click **Add**. In the next dialog box select 'Internet Protocol (TCP/IP)' and confirm with **OK**.*

③ If you use a router for Internet access, you will still need to configure it, because the router dials into the Internet, not the computer. Under **Start ▶ Settings ▶ Control Panel ▶ Internet Options** select the 'Connections' tab and enable the 'Never dial a connection' option. Close the dialogs with **OK**.

3.1.3 Windows XP

The Windows XP start menu can be configured in different ways. See the Windows XP documentation for more information.

① Open the properties of the LAN connection on the connected computers. Select **Start ▶ Control Panel ▶ Network and Internet Connections ▶ Network Connections**. Click with the right mouse button on the corresponding LAN connection and select 'Properties'.

② Click the entry for the TCP/IP protocol of the network adapter and on **Properties**. Enable the option 'Obtain an IP address automatically'. You can ignore all other options: they either remain empty or retain their default settings. Close the dialogs with **OK**.

*If you cannot find an entry similar to 'TCP/IP' or 'TCP/IP -> Network Adapter Name' or 'Internet Protocol (TCP/IP)', you must install the TCP/IP protocol. Under **Install** select 'Protocol' and click **Add**. In the next dialog box select 'Internet Protocol (TCP/IP)' and confirm with **OK**.*

③ If you use a router for Internet access, you will still need to configure it, because the router dials into the Internet, not the computer. Under **Start ▶ Control Panel ▶ Network and Internet Connections ▶ Internet Options** select the 'Connections' tab and enable the 'Never dial a connection' option. Close the dialogs with **OK**.

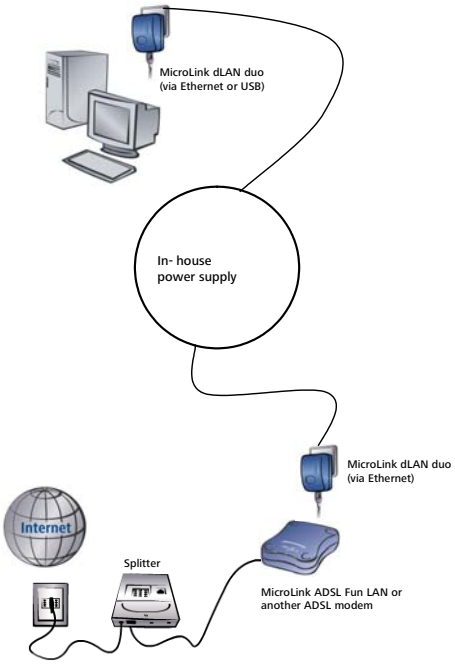
Other Internet applications such as e-mail clients may also need this information. This generally involves changing a setting with a name like 'Connect to' or similar to 'LAN'.

3.2 Examples of applications

This section demonstrates some current application scenarios.

3.2.1 Internet ADSL workstation solution—option 1

Workstation with Internet connection over an ADSL modem



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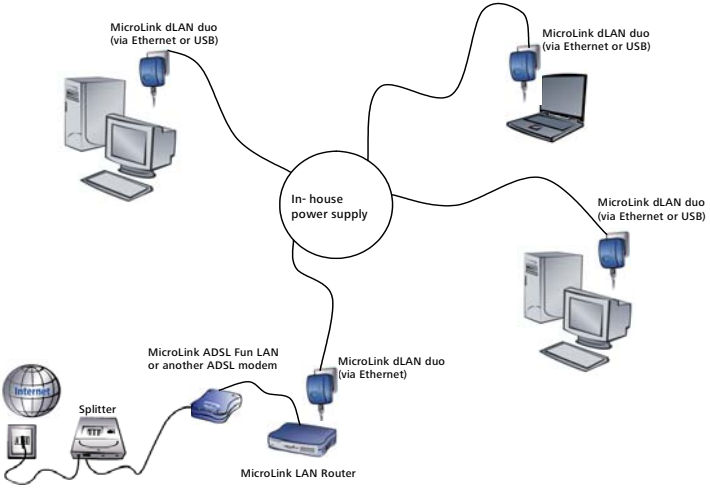
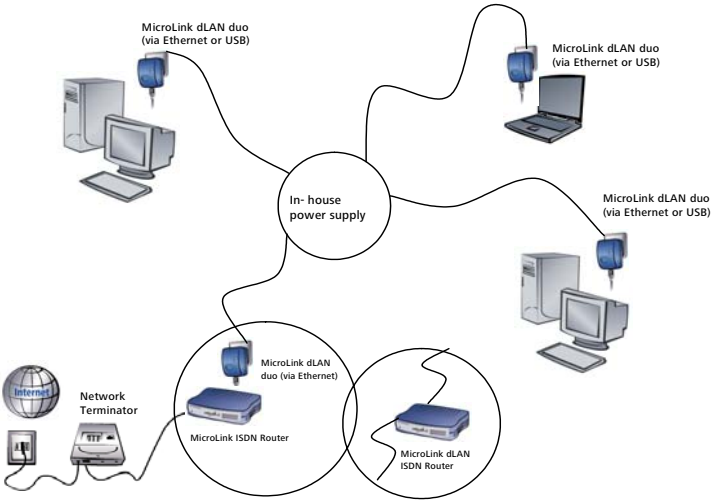
3.2.2 Home networking—option 2

Networking several workstations with one Internet connection over a LAN router and an ADSL modem



3.2.3 Home networking—option 3

Networking several workstations with one Internet connection over an ADSL router



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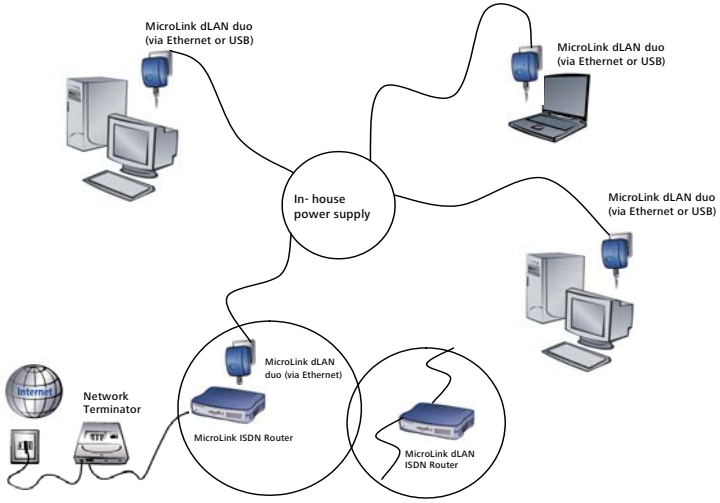
3.2.4 Home networking—option 4

Networking several workstations with one Internet connection over an ISDN router



3.3 Worth knowing

Network volume

The maximum number of dLAN adapters in a single-family house is theoretically 253 connections, but in practice no more than 10 devices should be transferring data simultaneously.

Compatibility

The devolo dLAN adapter are compatible to all other devolo LAN products, to all devices that comply with the IEEE 802.3 standard and to other HomePlug devices.

Network security

Normally the electric meter forms a physical barrier, i.e. only devices connected to this meter can be part of the network and benefit from the phase coupling. Furthermore, a dLAN adapter's internal device encryption is used which can be individually configured with the MicroLink dLAN Configuration Wizard. For more information see the 'devolo MicroLink dLAN Software' chapter.

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How to use passwords correctly

You can improve your security substantially by following some important rules regarding the use of passwords.

- Keep your passwords as secret as possible.
  - Never write a password down. Popular, but completely unsuitable storage options include notebooks, wallets and text files in computers. Do not pass on your password unnecessarily.
- Select a random password.
  - Use random strings of letters and numbers. Passwords from common language usage are not secure.
- Change the password regularly or immediately if you feel it has been compromised.
  - Passwords should be changed as frequently as possible. This requires a little effort, but increases your security considerably.
  - Even if only the slightest indication of a leak exists, the password should be changed.

For the sake of security, the DESpro encryption is used. It can be individually configured with the MicroLink dLAN Configuration Wizard. For more information see the 'devolo MicroLink dLAN Software' chapter.

You can find more answers to frequently asked questions (FAQs) at our home page www.devolo.com.

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4 devolo MicroLink dLAN Software

Now that you know something about networks, this chapter introduces you to the MicroLink dLAN Configuration Wizard, MicroLink Informer and MicroLink EasyShare devolo tools. It describes how to install them and how to configure your dLAN network.

4.1 Overview of the devolo software

4.1.1 MicroLink dLAN Configuration Wizard

The MicroLink dLAN Configuration Wizard helps you to build and change your encrypted dLAN network. With its help, you can add dLAN adapters to your network. It allows you to configure all dLAN adapters on the network from a central location, such as from a single workstation. For the encryption process, you need the security IDs of the dLAN adapters (provided on the underside of unit) and a network password of your choosing, which you will assign.

4.1.2 MicroLink Informer

The MicroLink Informer displays information about all dLAN devices in your network, such as their MAC addresses for dLAN and current transfer speeds.

The MAC address (Media Access Control) is a serial number and unique. It is programmed into the hardware and cannot be changed. The MAC address for dLAN can be found on the underside of the dLAN adapter.

4.1.3 MicroLink EasyShare

MicroLink EasyShare is a file-sharing and chat tool for your local network. It allows you to exchange files easily between local Windows computers. The chat function allows instant communication between all network users.

4.2 Installing the devolo MicroLink dLAN Software

① Put the enclosed devolo product CD in your CD-ROM drive.

② From the CD setup, select 'Install MicroLink dLAN Software'. Windows starts the wizard. Confirm by clicking **Next**.

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③ Select the devolo MicroLink dLAN Software tools ('devolo MicroLink dLAN Configuration Wizard', 'devolo MicroLink Informer' and/or 'devolo MicroLink EasyShare') you want to install, and then click **Next**.

④ The next dialog window shows the default target directory (preset by devolo), to which the devolo tools will be installed. You can accept the suggested directory or select a new one. Confirm your selection by clicking **Next**.

⑤ Confirm once again by clicking **Next**, then end the installation by clicking **Finish**.

⑥ After the installation has been completed successfully, start the devolo tools by clicking **Start** ▶ **Programs** ▶ **devolo** ▶ **MicroLink dLAN Configuration Wizard**, **MicroLink EasyShare** or **MicroLink Informer**.

4.3 Configuration of the dLAN network using the MicroLink dLAN Configuration Wizard

Please have the previously noted dLAN adapters security IDs ready. The MicroLink dLAN Configuration Wizard requires them for configuration of the network. You will find the security ID on the bottom of the device.

① Start the MicroLink dLAN Configuration Wizard under **Start** ▶ **Programs** ▶ **devolo** ▶ **MicroLink dLAN Configuration Wizard**.

② Confirm with **Next**. The MicroLink dLAN Configuration Wizard starts the network analysis and searches for dLAN adapters on your network.

Note that all dLAN adapters that you want to add to your network must also be connected to the power supply.

③ The dLAN adapters connected directly to your computer is detected automatically. All other dLAN adapters have to be entered manually. Enter in sequence the security IDs of the dLAN adapters that are to be included

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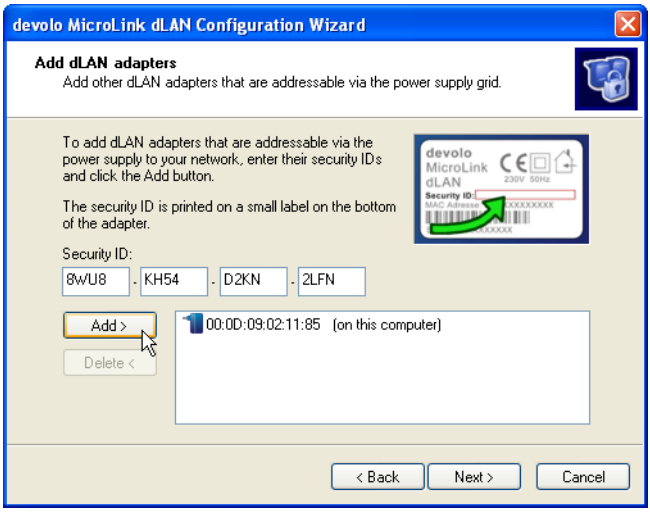
into a network and click **Add**. Click **Next** when you have entered all desired dLAN adapters.


devolo MicroLink dLAN Configuration Wizard
Add dLAN adapters
Add other dLAN adapters that are addressable via the power supply grid.
To add dLAN adapters that are addressable via the power supply to your network, enter their security IDs and click the Add button.
The security ID is printed on a small label on the bottom of the adapter.
devolo
MicroLink
dLAN
Security ID:
Security ID:
8WU8 - KH54 - D2KN - 2LFN
Add >
Delete <
00:0D:09:02:11:85 (on this computer)
< Back
Next >
Cancel

④ In the following dialog box enter your network password and confirm your input with **Next**.

*The password set up initially by devolo is **HomePlug**.*

⑤ Your network password is now assigned to the dLAN adapters selected for the network.

⑥ Exit securing your network by clicking **Finish**. Your dLAN network is now secure against unauthorized access from outside.

The configuration of the dLAN network can be changed or updated at any time. To do this repeat the configuration process as described above.

4.4 Overview in the dLAN network with the MicroLink Informer

Due to the MicroLink Informer you always have an overview of all dLAN adapters in your dLAN network. The MicroLink Informer shows the dLAN

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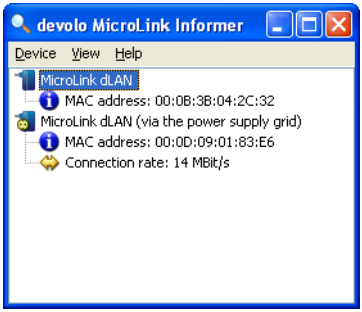
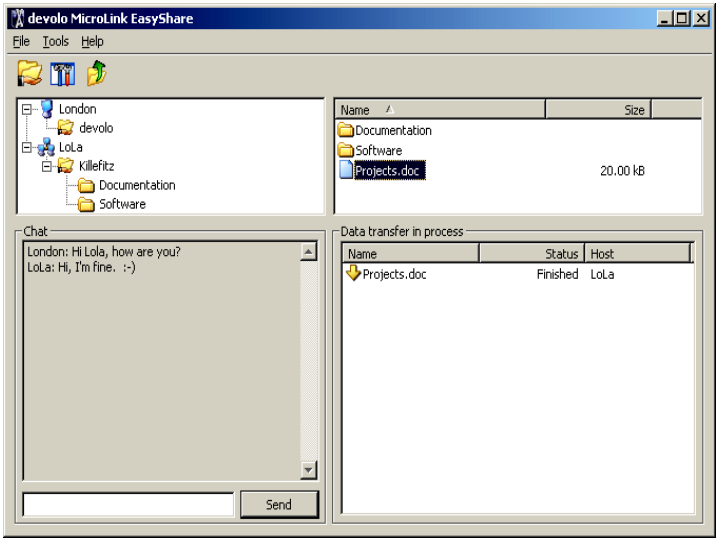
adapter connected directly to the computer as well as all dLAN adapters that are included into the same dLAN network.



The MicroLink Informer displays information about all dLAN devices in your network, such as their MAC addresses for dLAN and current transfer speeds. Via **Device** ▶ **Rename** you can change the name of the selected device.

4.5 Communication in the dLAN using the MicroLink EasyShare

All users on the local network who have started MicroLink EasyShare are automatically recognized by the program and listed:



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4.5.1 Configuration

The MicroLink EasyShare software provides two easy wizards, which will guide you quickly and easily through the configuration process: the first setup wizard, which starts automatically the first time the program is started, and the sharing wizard, which allows you to add shared items at any time. The individual functions of the MicroLink EasyShare software are described here:

Folder sharing

To share data with others, a MicroLink EasyShare network user has to make the data available in a shared folder. When a folder is shared, all of its files as well as the files of all its subdirectories become available to all users on the MicroLink EasyShare network. Folders can be shared either by using the initial setup wizard, which opens automatically the first time the MicroLink EasyShare is started, or by using the sharing wizard. You can open the sharing wizard by clicking the **Add share** button, or by selecting **File** ▶ **Add share** from the menu.

Options

Every computer has a name. When MicroLink EasyShare is first installed, you can assign a new name to your computer or use the default name suggested by the operating system. Your computer is visible by this name to all MicroLink EasyShare users.

The computer name can be changed at any time by clicking the **Options** button or by selecting **Tools** ▶ **Options** from the menu.

Refreshing shared folders

To view (newly) shared folders of other MicroLink EasyShare network users, select **File** ▶ **Refresh** from the menu, or **Refresh** from the context menu (right mouse button). The contents of all shared folders will appear in the top right-hand window.

Downloading files

To download shared files from other MicroLink EasyShare network users, select the computer belonging to the user and then mark the shared folder for that user. The upper-right window then lists all the contents of the folder. From the list, mark the files and/or folders that you want to download and then select **File** ▶ **Download** from the menu, or **Download** from the context menu (right mouse button). Choose a target folder on your computer and

confirm by clicking **OK**. The files are now downloaded to your computer. The status of the download is displayed in the lower-right window entitled 'Data transfer in process'.

Data transfer in process

All 'Data transfer in process' are displayed in the lower right window and disappear from the screen once they are finished.

- The 'Name' column indicates the name of the file being downloaded.
- The 'Status' column shows the current transfer progress and the transfer speed.
- The 'Host' column shows the computer from which the file is being downloaded, or to which it is being uploaded from your computer.

You can cancel the current download by clicking the file and selecting **Cancel** from the context menu (right mouse button).

Chatting

The lower left window functions as a chat room, which is visible and accessible to all MicroLink EasyShare users on the local network. Users can "chat" by writing messages and clicking **Send**.

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5 Appendix

5.1 Technical data

This table has detailed information for those interested.

	MicroLink dLAN duo
Standards	Ethernet specification IEEE 802.3, IEEE 802.3x, IEEE 802.3u Auto MDI/X compatible to USB specification, Rev. 1.1 compatible to HomePlug standard 1.1
Protocols	CSMA/CD
Trabsfer rate	14 Mbps
Transfer procedure	Asynchronous
Modulation	OFDM—84 carrier
Range	Up to 200 m via power supply
Security	DESpro encryption via power supply
LEDs	3 ports (Link/Act 10 Ethernet, Link/Act 100 Ethernet, USB) 3 HomePlug status (Power, Act, Link)
dLAN connection	Standard power plug
Computer interface	RJ45 or USB
Power consumption	3.3 VA (max.)
Power supply	Integrated power supply via power socket Rated voltage: 110 - 230 VAC Rated current: 0.13 A Rated frequency: 50 Hz
Environment	Humidity (non-condensing): 10-90% Storage: -25°C – 70°C Operation: 0°C – 40°C
System requirements	Ethernet or USB interface Windows 98, Windows Me, Windows 2000, Windows XP, Linux, Mac OS X (only for Ethernet connection) or all TCP/IP operating systems
CE conformity	CE-compliant in accordance with the technical requirements of R&TTE for all EU countries and Switzerland
Design	Plastic housing 80 x 63 x 37 mm (height x width x depth)
Warranty	3 years

EN

CE

CE conformity

This product complies with the technical requirements of the 1999/5/EC Directive (R&TTE) and the other relevant provisions of the FTEG, and it is designed for use in the EU and Switzerland.

The product is class A equipment. This equipment may cause interference with radio waves in home use; if this occurs the operator may be required to take corrective action.

Device care and maintenance

There are no user-serviceable parts within the housing of the device. Never open the housing.

To clean the device housing of soil, use a damp cloth or a lens-cleaning towel. Never clean the MicroLink dLAN duo using water, thinner, benzene, alcohol or any sharp cleaning aids, as these materials can damage the housing.

EN

5.2 Declaration of conformity

CE

KONFORMITÄTSERKLÄRUNG

EC DECLARATION OF CONFORMITY

Die Firma: / The Company: **devolo AG**
Sonnenweg 11
52070 Aachen

erklärt, dass das Produkt: / declares that the product: **MicroLink® dLAN®**

Verwendungszweck: / Intended purpose: **PLC-Ethernet-Adapter**
PLC Ethernet adapter

den grundlegenden Anforderungen des § 3 und den übrigen einschlägigen Bestimmungen des FTEG (Artikel 3 der R&TTE) entspricht.
complies with the appropriate essential requirements of the FTEG (Article 3 of R&TTE) and the other relevant provisions.

Harmonisierte Normen: / Harmonised standards: Gesundheit und Sicherheit gemäß §3 (1) 1. (Artikel 3 (1) a))
Health and safety requirements contained in §3 (1) 1. (Article 3 (1) a))

EN 60950-1: 2001

Harmonisierte Normen: / Harmonised standards: Schutzanforderungen in Bezug auf die EMV §3 (1) 2, (Artikel 3 (1) b)
Protection requirements with respect to EMC §3 (1) 2, (Article 3 (1) b)

EN 55024: 1998 +A1: 2001
EN 55022: 1998 +A1: 2000 and Expert Opinion by Competent Body EMC (CE 0682)

Diese Erklärung wird verantwortlich abgegeben durch:
This declaration is submitted by:

Aachen, 25. November 2003
Aachen, 25th November 2003

Heiko Harbers
Vorstandsvorsitzender
CEO

EN

5.3 Warranty conditions

The devolo AG warranty is given to purchasers of devolo products in addition to the warranty conditions provided by law and in accordance with the following conditions:

1 Warranty coverage

a) The warranty covers the equipment delivered and all its parts. Parts will, at devolo's sole discretion, be replaced or repaired free of charge if, despite proven proper handling and adherence to the operating instructions, these parts became defective due to fabrication and/or material defects. Alternatively, devolo reserves the right to replace the defective product with a comparable product with the same specifications and features. Operating manuals and possibly supplied software are excluded from the warranty.

b) Material and service charges shall be covered by devolo, but not shipping and handling costs involved in transport from the buyer to the service station and/or to devolo.

c) Replaced parts become property of devolo.

d) devolo is authorized to carry out technical changes (e.g. firmware updates) beyond repair and replacement of defective parts in order to bring the equipment up to the current technical state. This does not result in any additional charge for the customer. A legal claim to this service does not exist.

2 Warranty period

The warranty period for this devolo product is three years. This period begins at the day of delivery from the devolo dealer. Warranty services carried out by devolo do not result in an extension of the warranty period nor do they initiate a new warranty period. The warranty period for installed replacement parts ends with the warranty period of the device as a whole.

3 Warranty procedure

a) If defects appear during the warranty period, the warranty claims must be made immediately, at the latest within a period of 7 days.

b) In the case of any externally visible damage arising from transport (e.g. damage to the housing), the person carrying out the transportation and the sender should be informed immediately. On discovery of damage which is not externally visible, the transport company and the sender are to be immediately informed in writing, at the latest within 3 days of delivery.

c) Transport to and from the location where the warranty claim is accepted and/or the repaired device is exchanged, is at the purchaser's own risk and cost.

d) Warranty claims are only valid if a copy of the original purchase receipt is returned with the device. devolo reserves the right to require the submission of the original purchase receipt.

4 Suspension of the warranty

All warranty claims will be deemed invalid

a) if the label with the serial number has been removed from the device,

b) if the device is damaged or destroyed as a result of acts of nature or by environmental influences (moisture, electric shock, dust, etc.),

c) if the device was stored or operated under conditions not in compliance with the technical specifications,

d) if the damage occurred due to incorrect handling, especially to non-observance of the system description and the operating instructions,

e) if the device was opened, repaired or modified by persons not contracted by devolo,

f) if the device shows any kind of mechanical damage, or

g) if the warranty claim has not been reported in accordance with 3a) or 3b).

5 Operating mistakes

If it becomes apparent that the reported malfunction of the device has been caused by unsuitable hardware, software, installation or operation, devolo reserves the right to charge the purchaser for the resulting testing costs.

6 Additional regulations

a) The above conditions define the complete scope of devolo's legal liability.

b) The warranty gives no entitlement to additional claims, such as any refund in full or in part. Compensation claims, regardless of the legal basis, are excluded. This does not apply if e.g. injury to persons or damage to private property are specifically covered by the product liability law, or in cases of intentional act or culpable negligence.

c) Claims for compensation of lost profits, indirect or consequential detriments, are excluded.

d) devolo is not liable for lost data or retrieval of lost data in cases of slight and ordinary negligence.

e) In the case that the intentional or culpable negligence of devolo employees has caused a loss of data, devolo will be liable for those costs typical to the recovery of data where periodic security data back-ups have been made.

f) The warranty is valid only for the first purchaser and is not transferable.

g) The court of jurisdiction is located in Aachen, Germany in the case that the purchaser is a merchant. If the purchaser does not have a court of jurisdiction in the Federal Republic of Germany or if he moves his domicile out of Germany after conclusion of the contract, devolo's court of jurisdiction applies. This is also applicable if the purchaser's domicile is not known at the time of institution of proceedings.

h) The law of the Federal Republic of Germany is applicable. The UN commercial law does not apply to dealings between devolo and the purchaser.